Examination Papers.

[We intend for the future to insert under this heading, in chronological order, the various examination papers that have been set for admission to high schools.]

Our file being now complete we insert the omitted papers on

GEOGRAPHY.

DECEMBER, 1881.

1. What is Political Geography? Physical Geography? Define the following:—First Meridian, Zone, Equinox, Plateau, Water-shed, Glacier, Climate.

2. Give the boundaries of the different zones, and the breadth of each zone in degrees. Account for the positions of the bounding lines of the zones.

3. What and where are the following:—Vancouver, Three Rivers. Trinidad, Avon, Corfu, Mersey, Stromboli, Hamburg, Hindoo Koosh, Lyons?

4. Name the bodies of water into which the following rivers flow:—Garonne, Tagus, Elbe, Volga, Oder.

5. Between what cities in the United States and the British Islands is trade with Canada chiefly carried on? Tell what you know of the commodities exchanged.

6. Over what railroads would you pass in going from (1) Toronto to St. Thomas; (2) Owen Sound to Ottawa? Describe a trip from Montreal to Lake Superior.

7. What information respecting a country can be obtained from a knowledge of its mountains?

8. Name and classify according to slopes the principal rivers of Asia.

9. From what countries do we chiefly obtain the following:—Coal, iron, cotton, rice, sugar, coffee, silk, opium?

DECEMBER, 1882.

1. Tell what you know about the earth's shape, size, motions and distance from the sun.

2. What place has latitude 0° and longitude 0°? In about what latitude do we live? Where do all meridians meet? Where is a degree of latitude longest? What zone is Ontario in? How many degrees broad is the torrid zone?

3. Bound the Dominion along the south from ocean to ocean. Give the Provinces of the Dominion, their capitals and positions. Put down in order the names of the rivers, lakes, canals or rapids through which a vessel passes in a voyage from Duluth to Quebec.

4. Tell what you know about the chief seaports of the Dominion.

5. The Province of Ontario is partly bounded by Lake Ontario. Draw a line indicating the course of this boundary, and mark the position of the principal towns and cities.

6. Define—Delta, Oasis, Longitude, Zenith, Horizon, Zone, Watershed.

7. Where and what are the following:—Alexandria, Blanc, Capricorn, Euphrates, Iowa, Jersey, Kars, Land's End, Potosi, Queenston, Riga, Madeira, Congo, Vienna, Tel-el-Kebir; Hobart Town, Funen, Heligoland, Arran?

8. State the population of the Dominion, and mention the chief exports of each Province.

ARITHMETIC.

AUTUMN TERM, 1873.

1. By what number must £4 16s. 3¾d. be multiplied to give a product of £89 17s. 3¾d.?

2. If I own ¾ of 4/5 of ⅔ a ship worth $20,-000, and sell 1⅛ of the ship, what will the part I have left be worth?

3. Prove the rule for multiplication of fractions.

Simplify $\dfrac{1\frac{1}{4}r}{\cdot 1\frac{1}{5}} \div \left(\dfrac{2\frac{1}{4} \quad 7\frac{1}{2}}{4\frac{1}{16} \quad 3\frac{1}{4}}\right) + 3\frac{1}{2}.$

4. If A can do a work in 3¾ days, and B in 4½ days, in what time will both working together do the work?

5. If the 2lb. loaf cost 6¾ cents, when wheat is $1.10 a bushel, what is the price of wheat when the 2lb. loaf costs 7½ cents?

6. Simplify $\dfrac{3\frac{1}{2} - .04 \quad .015 + 2.1}{5 - .0625 \quad .035}.$

7. Find the expense of fencing a railway (both sides), 73 miles in length, at the rate of $5.50 per yard.

8. If a wheel make 260 revolutions in passing over one mile, 520 yards, 2 feet, what is its circumference?

9. Find cost of 7,225lbs. coal at $7.25 per ton of 2,000lbs.

10. Find the sum and difference of 2754⅞ and 2633⅔.

NOTE. –Candidates for classical course omit Nos. 5 and 6.

Ten marks for each question.

JANUARY, 1874.

N. B.—Full work required.

1. By what must £157 12 10½ be divided to give a quotient of 33½?

2. How much wheat is necessary to sow a field containing 7¾ acres if ¼ of an ounce is sown on every square yard?

3. How many minutes between 12 o'clock noon, May 24th, and half-past nine in the f..renoon of September 3rd? and express the answer as a fraction of the year.

4. Add 1⅔ of ⁷⁄₈, ⅜ of 1¾, —.

5. A house and lot cost together $3,600: the value of the lot is ⅛ that of the house. Find the value of each.

6. Subtract 2⁵⁄₈₀ sq. yards from ⅝ of ₁⁷₄ of 3 acs.

7. Prove that multiplying the numerator of a fraction by any number produces the same effect as dividing the denominator by the same number.

8. Simplify .75 of 1⅛ ÷ 7.6 of ₇⁄₆ – (1.875 – 1⅛)

×2 ÷ $\dfrac{4.875}{4\frac{1}{5}}$.

9. If ⅜ of ⅔ of an acre produce 42 bushels of potatoes, how many bushels will an acre produce?

10. A man working 9¾ hours per day finishes a piece of work in six days; in what time would he have finished if he had worked 8⅓ hours per day?

NOTE.—Candidates for the classical course may omit Nos. 8 and 10.

JUNE, 1874.

N. B.—Full work required.

1. The dividend is one billion two hundred and twenty million two hundred and thirty thousand and ninety-two, the quotient six thousand and eighty-four, and the remainder forty-eight thousand. Find the divisor.

2. Reduce 3 ac. 2 ro. 14 sq. pr. 4 sq. ft. 72 sq. in. to square inches; and 170184 square feet to acres.

3. 797 tons, 19 cwt. 2 qrs. 14 lbs. is divided among a certain number of people, so that each receives 5 tons, 3 cwt. 2 qrs. 16 lbs. How many people are there?

4. Shew which is the greatest and which the least of the following fractions:— 1⅔ of 1, ⁵⁄₇ of 3⅓, ⅓ of 2⅜.

5. Reduce to its simplest form:

$\left\{ \dfrac{2\frac{1}{4} - \frac{2}{3} \text{ of } 1\frac{2}{3} \quad 1}{\dfrac{6\frac{1}{4}}{\frac{1}{3} \text{ of } 3\frac{1}{4} + \dfrac{2\frac{1}{2}}{18}}} \right\} \div \dfrac{5\frac{1}{4}}{8\frac{3}{4}}$

6. What fraction of £58 5s. 6d. is ⅞ of £17 2s. 3d.?

7. A man invested ⅜ of his capital in bank stock, ⅔ of the remainder in real estate, and had still $6,000 left. Find his capital.

8. Find the value of 43 cwt. 2 qrs. 21 lbs. a £2 16s. 8d. per cwt. (Qr. = 25 lbs.)

9. Find the difference between

$\dfrac{.26 + .2 \text{ of } 3 \quad .7}{.48 - .014 \text{ of } 20} \quad \& \quad \dfrac{4 .3 + 5 .6}{7 .4 - .2 \text{ of } 11.}$

10. A person after paying out of his income for a year, a tax of 4 cents in the dollar, has $7,200 left. Find his income for a year.

DECEMBER, 1874.

N. B.—Full work required.

1. The difference between the product of two numbers and 467 is ten millions, ten thousand, and ten; one of the numbers is twenty-one thousand and twenty-eight; what is the other number?

2. A cannon ball travels at the rate of 1,500 feet in a second and a half; how far will it have gone in 1⅓ of a minute?

3. How many grains are there in 9 oz., 17 dwts., 22 grs., and how many acres, &c., in 167,412,715 square inches?

4. How many yards, &c., of carpet 2 feet 1 inch wide, will it take to cover a floor that is 19 ft. 7 in. long, by eighteen ft. 9 inches wide?

5. After taking out of a purse ⅔ of its contents, ⅔ of the remainder was found to be 13s. 5¼d. What sum did it contain at first; and what part of £3 is that sum?

6. Find the value of

$\dfrac{5\frac{1}{2} \div \frac{3}{4}}{1\frac{1}{2} \text{ of } \frac{3}{8} \div 10\frac{1}{4}} \times \frac{3}{4} \text{ of} \dfrac{1\frac{1}{2} \text{ of } 4\frac{1}{2}}{13\frac{1}{4} \text{ of } 5\frac{1}{4}}$

7. What must be the length of a plot of ground, if the breadth be 15¾ feet, that its area may contain 46 square yards?

8. A pint contains 34⅓ cubic inches; how many gallons of water will fill a cistern 4ft. 4 in. long, 2 ft. 8 in. broad, and 1 ft. 1½ in. deep?

9. Reduce to a simple quantity

$\dfrac{2.8 \text{ of } 2.2\dot{7}}{1.13\dot{6}} + \dfrac{4 .4 - 2.8\dot{3}}{1 .6 + 2.6\dot{2}9} \text{ of } \dfrac{6.8 \text{ of } 3}{2.25}$

10. The chain for measuring land is 66 ft. long, and is divided into 100 links; what is the length of a fence that measures 2,456 links, and how much would it cost at $8.86 per yard?

Value of the above—10 each. Candidates for classical course may omit No.'s 9 and 10.

(To be continued.)